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IS 10145 (1982): bamboo supports for camouflaging equipment
[CED 9: Timber and Timber Stores]



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Indian Standard

SPECIFICATION FOR
BAMBOO SUPPORTS FOR
CAMOUFLAGING EQUIPMENT

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Indian Standard

SPECIFICATION FOR BAMBOO SUPPORTS FOR CAMOUFLAGING EQUIPMENT

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AMENDMENT NO. 1 AUGUST 1984

TO

IS:10145-1982 SPECIFICATION FOR BAMBOO SUPPORTS
FOR CAMOUFLAGING EQUIPMENT

Addendum

(Page 6, Fig. 1) - Add the following informal
table:

| SIZE | LENGTH, A mm | DIAMETER, B mm | CAVITY |
|-------|-----------------|-------------------|---|
| Large | 1 830 \pm 10 | 32 \pm 6 | Not to exceed 8.5 times the dia- meter of bamboo |
| Small | 915 \pm 10 | 25 \pm 6 | Not to exceed 6 times the dia- meter of bamboo |

(BDC 33)

Indian Standard
**SPECIFICATION FOR
BAMBOO SUPPORTS FOR
CAMOUFLAGING EQUIPMENT**

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 26 February 1982, after the draft finalized by the Timber Stores Sectional Committee had been approved by the Civil Engineering Division Council.

0.2 A large number of bamboo supports for camouflaging equipment is required annually by the Ministry of Defence. Therefore, this standard has been prepared to provide guidance in the manufacture and purchase of such bamboo supports.

0.3 In the formulation of this standard due weightage has been given to international co-ordination among the standards and practices prevailing in different countries in addition to relating it to the practices in the field in this country.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard covers requirements relating to materials, types, dimensions, workmanship and finish, permissible defects and preservation of bamboo supports for camouflaging equipment.

2. TERMINOLOGY

2.0 For the purpose of this standard, the following definitions shall apply.

*Rules for rounding off numerical values (*revised*).

2.1 Adequately Seasoned Bamboo — Bamboo felled not less than six weeks before processing into poles.

2.2 Burr — The turned up edge of metal resulting from the operation of punching, drilling and cutting.

2.3 Collapse — A deep depression in internode which results in the cracking of the internal shell wall.

2.4 Dead Bamboo — The bamboo which has died after flowering or injury to its stem. It is distinguishable by its dull greyish colour, lightness in weight and its brittleness.

2.5 Excessive Charring — Charring deeper than 3 mm.

2.6 'Ghoon' Holes — Holes caused by the activities of dinoderus beetles.

2.7 Immature Bamboo — The bamboo having bud scars on the stem. It is distinguishable by its dull yellowish colour.

2.8 Internode — The portion of bamboo between two nodes.

2.9 Node — The place on the stem from which the branches shoot off.

2.10 Objectionable Crack — A separation of the fibres in the longitudinal direction which extends beyond 3 mm in the depth of the skin of a bamboo and beyond a node.

2.11 Reasonably Straight Bamboo — Bamboo out of straight by not more than one diameter.

2.12 Shell — The wall of the bamboo.

2.13 Split — A separation of the fibres in the longitudinal direction, completely rupturing the shell wall.

2.14 Top End of Bamboo — The tapered end (thin end) of bamboo where the shell thickness is lesser than the other end.

3. MATERIAL

3.1 Bamboo — Any species of bamboo may be used. The bamboo shall be mature, sound (not dead); reasonably straight and adequately seasoned. It shall be free from 'Ghoon' (Dinoderus) holes, any kind of decay (rot), collapse, splits, objectionable cracks, cuts across the grain and excessive charring and any other defect, except those permitted in the finished supports as mentioned under 8, which is likely to reduce the usefulness of fabricated supports.

3.2 Mild Steel — Rust free mild steel wire and sheet shall be used for the metal components.

4. SIZES

4.1 Bamboo supports for camouflaging equipment shall be of the following two sizes depending upon the dimensions (*see 5*):

- a) Large, and
- b) Small.

5. DIMENSIONS AND TOLERANCES

5.1 The 'supports' shall conform to the dimensions as shown in Fig. 1.

5.2 Tolerances — Where tolerances on dimensions are not shown in Fig. 1, normal manufacturing tolerances shall be permissible on all dimensions.

6. MANUFACTURE

6.1 The supports shall be manufactured according to the shape and design shown in Fig. 1.

6.2 In forming the supports, the bottom end of bamboo shall be cut immediately below the node and finished smooth. The hollow end shall be securely and tightly plugged with timber or solid bamboo.

6.3 Two small slots shall be neatly cut into the bamboo to take both ends of the wire 'V' piece which shall be held in position by means of a metal band. The bamboo may be rasped for fitting of metal components; provided the rasping is not deeper than 1 mm and the rasped portion is liberally swabbed with neat (undiluted) creosote oil.

6.4 The metal components shall be manufactured and fitted as shown in Fig. 1.

7. WORKMANSHIP AND FINISH

7.1 The nodal portions of bamboo shall be smoothly finished. The metal components shall be free from sharp edges, cracks and burrs. The welding of the joints of the band shall be clean, continuous and sound. The metal components shall be properly and correctly fitted and the ends of the rivet properly snapped. The shape of the wire loop shall be properly made and smoothly finished.

8. PERMISSIBLE DEFECTS

8.1 Defects to the following extent shall be permissible in the finished supports:

a) *Natural Defects*

- | | | |
|-----------------|---|---|
| i) Dead Skin | } | Up to 4 internodes and not deeper than 3 mm |
| ii) Water Marks | | |

b) *Biological Defects*

- i) Xylocopa holes — one hole per support
- ii) Estigmina attack — Not deeper than 3 mm

c) *Manufacturing Defects*

Knife cuts, rasping and chipping — Not deeper than 3 mm

9. PRESERVATION

9.1 Unless otherwise specified, bamboo supports shall be treated as follows:

- a) Bamboo supports shall be thoroughly cleaned and metal components free from all traces of rust and foreign deposition before the preservative treatment is carried out; and
- b) Bamboo supports shall be preserved by complete immersion in creosote oil conforming to Type II of IS : 218-1961* for a minimum period of 18 hours at room temperature. Alternatively, bamboo supports may be preserved by complete immersion in neat and hot (about 90°C) creosote oil for a minimum period of 30 minutes, immediately followed by complete immersion in neat creosote oil at room temperature for a minimum period of 30 minutes.

9.2 The metal components, after wiping off the preservative, shall be brush treated at room temperature, using temporary corrosion preventive fluid, hard film, solvent deposited conforming to IS : 1153-1975†.

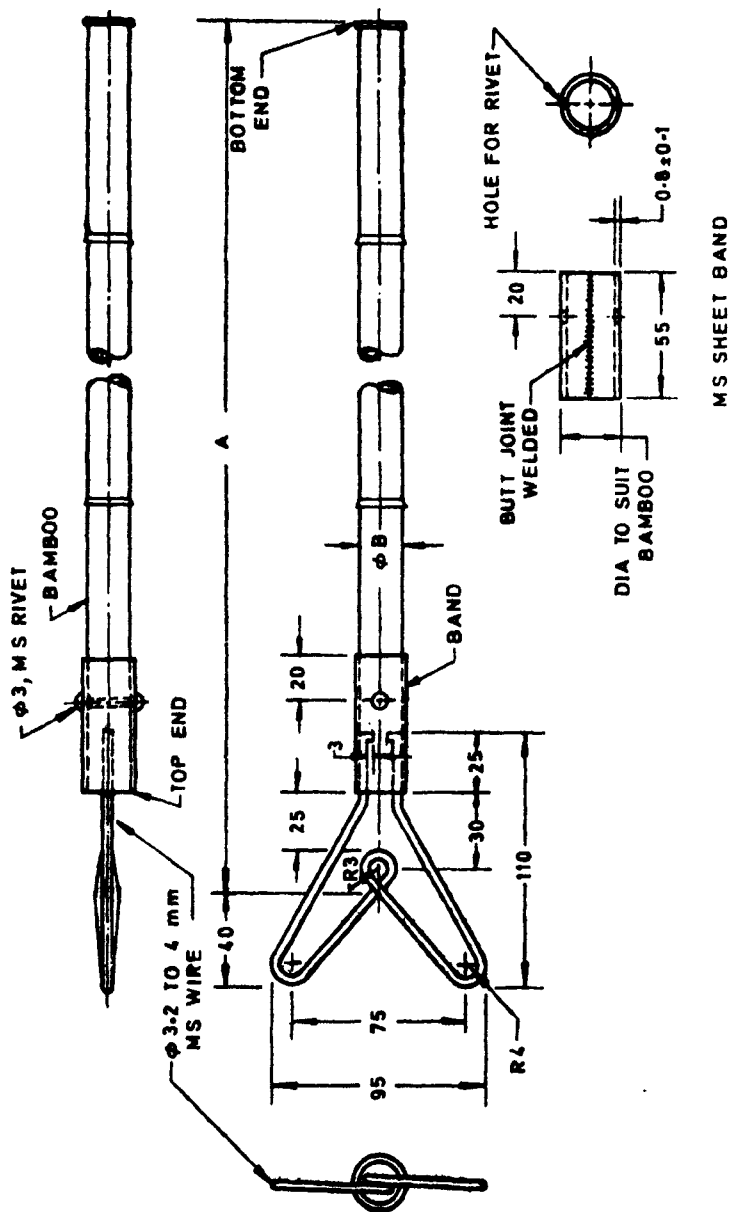
10. MARKING

10.1 Unless otherwise specified, each bamboo support shall be legibly and indelibly marked with the following information:

- a) The supplier's name or initials or recognized trade-mark, if any;
- b) The year of supply; and
- c) The size of the bamboo supports (large or small).

*Specification for creosote and anthracene oil for use as wood preservatives (revised).

†Specification for temporary corrosion preventive fluid, hard film, solvent deposited (first revision).



All dimensions in millimetres.

FIG. 1 BAMBOO SUPPORTS FOR CAMOUFLAGING EQUIPMENT

10.1.1 The bamboo supports may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors may be obtained from the Indian Standards Institution.

INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

| QUANTITY | UNIT | SYMBOL |
|---------------------------|----------|--------|
| Length | metre | m |
| Mass | kilogram | kg |
| Time | second | s |
| Electric current | ampere | A |
| Thermodynamic temperature | kelvin | K |
| Luminous intensity | candela | cd |
| Amount of substance | mole | mol |

Supplementary Units

| QUANTITY | UNIT | SYMBOL |
|-------------|-----------|--------|
| Plane angle | radian | rad |
| Solid angle | steradian | sr |

Derived Units

| QUANTITY | UNIT | SYMBOL | DEFINITION |
|----------------------|---------|--------|--|
| Force | newton | N | $1 \text{ N} = 1 \text{ kg.m/s}^2$ |
| Energy | joule | J | $1 \text{ J} = 1 \text{ N.m}$ |
| Power | watt | W | $1 \text{ W} = 1 \text{ J/s}$ |
| Flux | weber | Wb | $1 \text{ Wb} = 1 \text{ V.s}$ |
| Flux density | tesla | T | $1 \text{ T} = 1 \text{ Wb/m}^2$ |
| Frequency | hertz | Hz | $1 \text{ Hz} = 1 \text{ c/s (s}^{-1}\text{)}$ |
| Electric conductance | siemens | S | $1 \text{ S} = 1 \text{ A/V}$ |
| Electromotive force | volt | V | $1 \text{ V} = 1 \text{ W/A}$ |
| Pressure, stress | pascal | Pa | $1 \text{ Pa} = 1 \text{ N/m}^2$ |

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